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## **130        TRAFFIC ENGINEERING GROUP FUNCTIONS AND RESPONSIBILITIES**

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The Traffic Engineering Group is responsible for formulating and administering a statewide traffic engineering program to provide for the safe and efficient operation of traffic. The following are examples of activities necessary to accomplish this goal:

- Adopt a Manual on Uniform Traffic Control Devices and develop and maintain a Traffic Control Supplement for use on all State highways
- Design, operate, maintain, and approve traffic engineering projects
- Maintain ADOT Traffic Engineering Policies, Guidelines, and Procedures for use by the traffic engineering staff
- Maintain a traffic records system to serve the needs of the State and local agencies for crash data

The Traffic Engineering Group is divided into 5 sections:

- Traffic Design Section
- Traffic Operations Section
- Traffic Records Section
- Hazard Elimination/No-Passing Zone Section
- Traffic Administration Section.

### **130.1   TRAFFIC DESIGN SECTION**

The Traffic Design Section is responsible for providing a variety of traffic engineering services:

1. Review scoping documents such as project assessments, design concept reports, and proposed plans to evaluate the design of safety and operational features on freeway projects, principal arterial system projects, and miscellaneous projects
2. Prepare and review:
  - traffic control plans, specifications, and estimates for construction projects
  - plans, specifications, and estimates for contract pavement marking projects
  - plans, specifications, and estimates for signing projects

- plans, specifications, and estimates to update and overlay existing freeway signing to meet current standards
  - plans, specifications, and estimates for traffic signal projects, including updating/modifying existing traffic signals to meet current standards and traffic safety/operational needs
  - plans, specifications, and estimates for highway, tunnel, and underpass lighting projects, including updating/modifying existing lighting to meet current standards and traffic safety/operational needs
  - plans, specifications, and estimates for miscellaneous highway construction projects involving electrical features and communications equipment
3. Assist the Districts with materials reviews on signing, traffic signal, and highway lighting projects
  4. Prepare as-built drawings of in-house and contract traffic signals, highway lighting, and miscellaneous electrical highway construction projects
  5. Maintain an updated State Route Numbering Master Plan
  6. Review and approve construction and maintenance intergovernmental agreements on traffic signal and lighting projects developed outside the MAG and PAG transportation corridors
  7. Conduct, review, and evaluate traffic engineering studies, including traffic signal needs, speed zoning studies, lighting, crosswalk needs, and predesign traffic analysis
  8. Prepare administrative rules on the application of specific traffic control devices or programs
  9. Prepare work orders for miscellaneous sign installations and modifications
  10. Process speed limit resolutions which establish all speed limits on the State highway system
  11. Administer Lump Sum for Traffic Signals in Five Year Highway Construction Program for new signals, new lighting, and other intersection improvements
  12. Administer Lump Sum for On-Call Consultants for Construction Preparation in Five Year Highway Construction Program

## 130.2 TRAFFIC OPERATIONS SECTION

The Traffic Operations Section is responsible for a variety of statewide traffic operational services:

1. Fabricate and distribute traffic signs used on the State highway system
2. Construct and install interstate and freeway signing and all overhead sign structures
3. Maintain long line striping on rural highways
4. Purchase and distribute traffic paint and beads
5. Administer funding contracts for raised pavement marker maintenance. Administer contract for loop detector replacement
6. Provide initial timing for traffic signals
7. Maintain timing cards for all signals maintained by ADOT. Provide signal timing information to attorneys, insurance companies, and the general public as directed by Risk Management
8. Administer Lump Sum for Signal Warehouse in Five Year Highway Construction Program for replacement or upgrading of traffic signal and lighting components statewide
9. Payment of utility bills for signals and lighting (except the I-10 tunnel and rural permanent variable message boards)
10. Purchase and warehouse electrical components for signals and lighting
11. Troubleshoot and repair electronic components in signal controllers
12. Prepare specifications and bid packages for procurement of equipment and supplies for Traffic Operations. Evaluate bids and make recommendations for award
13. Maintain standard specifications for traffic products.

### 130.3 TRAFFIC RECORDS SECTION

The Traffic Records Section is responsible for entering Arizona motor vehicle crash data into a State database, entering fatal crashes into a national database, and disseminating crash information to various customers.

Data entry involves:

1. Determination of whether the crash meets the criteria defined in ARS 28-667
2. Evaluation of whether the report constitutes a reportable crash, and, if so, it is checked, coded, and processed for computer input. Information concerning location, physical surroundings, environmental factors, traffic unit types, and driver and passenger data is included.

The Fatal Accident Reporting System (FARS) involves:

1. Preparation and coding of fatal crash data and transmittal of the data to the National Highway Traffic Safety Administration
2. Maintenance of a complete and accurate file of all fatal traffic crashes occurring in Arizona, including police crash reports, fatal supplements, death certificates, engineers' reports, drivers license records, and newspaper accounts
3. Maintaining and providing the official traffic crash fatality count for the State of Arizona.

Dissemination of crash information involves:

1. Maintenance of an accessible file of processed traffic crash reports
2. Providing copies of traffic crash reports to qualified governmental agencies
3. Processing of special requests from the Traffic Records databases, including:

- a) crash data tabulations for specified locations
  - b) special reports based on user-defined criteria and parameters
4. Production and distribution of standard Traffic Crash Summary reports to State and local agencies
  5. Production and distribution of Arizona Traffic Crash Annual Summary
  6. Preparation and maintenance of Off-Mainline Roadway Markers Log

#### 130.4 HAZARD ELIMINATION/NO-PASSING ZONE SECTION

The Hazard Elimination/No-Passing Zone (HES/NPZ) Section has the following responsibilities:

1. Develop procedures to identify CLOSE locations and to correlate accidents with roadway features
2. Implement safety projects and manage their development through the design process
3. Prepare Preliminary Accident Analyses for pavement preservation projects
4. Develop and maintain a No-Passing Zone Program on all rural State 2-lane and 3-lane highways
5. Develop and maintain horizontal curve data for warning signs on the State Highway System
6. Administer Hazard Elimination Safety Subprogram in Five Year Highway Construction Program.

#### 130.5 TRAFFIC ADMINISTRATION SECTION

The Traffic Administration Section is responsible for the administrative services for the Group which includes fiscal and budget management, personnel administration, training, and facilities management.

This section also is responsible for technical services which includes local area network and support and responses to citizens' and politicians' technical issues,

concerns, or requests. The Traffic Administration Group also develops and maintains the following publications:

1. Traffic Engineering Policies, Guidelines, and Procedures
2. Traffic Engineering Manual of Approved Signs
3. Traffic Control Supplement
4. Signing and Marking Standard Drawings
5. Traffic Signals and Lighting Standard Drawings
6. Traffic Impact Analysis for Proposed Development Guidelines
7. ADOT School Safety Program Guidelines.